1. An electrode array body comprising:

a body having a generally oval shape in the plane of the retina,

the oval shaped body being curved such that it substantially conforms to the spherical curvature of the retina of the recipient's eye thus minimizing stress concentration in the retina.

2. An electrode array body as in claim 1 comprising:

at least one mounting aperture in the body for attaching the electrode array to the retina with a tack.

3. An electrode array body as in claim 2 wherein,

the oval shaped body has a radius of spherical curvature, which approximates the curvature of the eye, that is decreasing near its edges thus causing the edge of the array to lift off of the retina, eliminating stress concentrations in the retina from contact with the electrode array body.

4. An electrode array body as in claim 3 wherein,

the oval shaped body is made of silicone having a hardness of about 50 or less on the Shore A scale as measured with a durometer.

5. A method of reducing stress in the retina caused by the electrode array body as in claim 2 wherein,

forming a strain relief internal tab by placing a strain relief slot partially around the mounting aperture.

6. An electrode array body as in claim 5 having,

a grasping handle attached to the oval shaped body for holding with a surgical instrument during implantation.

7. An electrode array body as in claim 5 wherein,

the oval shaped body is made of silicone having a hardness of about 50 or less on the Shore A scale as measured with a durometer.

8. An electrode array body as in claim 5 wherein,

a grasping handle attached to the oval shaped body for holding with a surgical instrument during implantation.

9. An electrode array body as in claim 5 wherein,

the oval shaped body has a radius of spherical curvature, which approximates the curvature of the eye, that is decreasing near its edges thus causing the edge of the array to lift off of the retina, eliminating stress concentrations in the retina from contact with the electrode array body.

10. A method of reducing stress in the retina caused by the electrode array body as in claim 5 wherein,

thinning the strain relief internal tab to minimize stress transfer from the mounting tack to the retina.

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11. An electrode array body as in claim 2 having,

a strain relief slot in the oval shaped body curved part of the way around the aperture which defines a strain relief internal tab for relief of stresses formed when the electrode array body is attached to the retina of the recipient.

12. An electrode array body as in claim 11 wherein,

the oval shaped body has a radius of spherical curvature, which approximates the curvature of the eye, that is decreasing near its edges thus causing the edge of the array to lift off of the retina, eliminating stress concentrations in the retina from contact with the electrode array body.

13. An electrode array body as in claim 11 wherein,

the strain relief internal tab is thinner than the rest of the electrode array body thereby reducing stress in the retina from attachment of the electrode array body.

14. An electrode array body as in claim 11 wherein,

the strain relief internal tab is made of a softer silicone than the rest of the electrode array body.

15. An electrode array body as in claim 11 wherein,

the oval shaped body is made of silicone having a hardness of about 50 or less on the Shore A scale as measured with a durometer.

16. An electrode array body as in claim 11 wherein,

a grasping handle attached to the oval shaped body for holding with a surgical instrument during implantation.

17. An electrode array body as in claim 11 having,

a grasping handle attached to the oval shaped body for holding with a surgical instrument during implantation.

18. An electrode array body as in claim 2 comprising:

a reinforcing ring surrounds the mounting aperture in the oval shaped body for structural support of a surgical tack.

19. An electrode array body as in claim 18 wherein,

the reinforcing ring is colored to make visually locating the mounting aperture by the surgeon during surgery easier.

20. An electrode array body as in claim 1 comprising:

at least one ferromagnetic keeper in the body for attaching the electrode array to the retina.

21. An electrode array body as in claim 20 comprising:

a strain relief slot in the oval shaped body curved part of the way around the ferromagnetic keeper which defines a strain relief internal tab for relief of stresses formed when the electrode array body is attached to the retina of the recipient.

22. An electrode array body as in claim 20 wherein,

the oval shaped body is made of silicone having a hardness of about 50 or less on the Shore A scale as measured with a durometer.

23. An electrode array body as in claim 20 having,

a rounded edge on the oval shaped body to eliminate stress concentrations in the retina from contact with the electrode array body.

24. An electrode array body as in claim 23 wherein,

the oval shaped body is made of silicone having a hardness of about 50 or less on the Shore A scale as measured with a durometer.

25. An electrode array body as in claim 20 having,

the oval shaped body has a radius of spherical curvature, which approximates the curvature of the eye, that is decreasing near its edges thus causing the edge of the array to lift off of the retina, eliminating stress concentrations in the retina from contact with the electrode array body.

26. An electrode array body as in claim 20 having,

a grasping handle attached to the oval shaped body for holding with a surgical instrument during implantation.

27. An electrode array body as in claim 1 wherein,

the oval shaped body has a rounded edge to eliminate stress concentrations in the retina caused by contact with the electrode array body.

28. An electrode array body as in claim 1 wherein,

the oval shaped body has a radius of spherical curvature, which approximates the curvature of the eye, that is decreasing near its edges thus causing the edge of the array to lift off of the retina, eliminating stress concentrations in the retina from contact with the electrode array body.

29. An electrode array body as in claim 1 wherein,

the oval shaped body is made of silicone having a hardness of about 50 or less on the Shore A scale as measured with a durometer.

30. An electrode array body as in claim 1 wherein,

the oval shaped body is made of silicone having a hardness of about 25 or less on the Shore A scale as measured with a durometer.

31. A method of reducing stress in the retina caused by the electrode array body as in claim 1 wherein,

fabricating the array from silicone having a hardness of about 50 or less on the Shore A scale as measured with a durometer.

32. A method of reducing stress in the retina caused by the electrode array body as in claim 1 wherein,

coiling a conductor in a feeder cable to eliminate pulling the electrode array body by the cable due to mechanical or thermal stresses,

conforming to the curvature to the retina thereby eliminating stress concentrations.

33. An electrode array body as in claim 1 wherein,

the oval shaped body has a radius of spherical curvature, which approximates the curvature of the eye, that is decreasing near its edges thus causing the edge of the array to lift off of the retina, eliminating stress concentrations in the retina from contact with the electrode array body.

34. An electrode array body as in claim 1 comprising:

a plurality of electrodes to transmit an electrical signal to the retina of the recipient of the electrode array body.

35. An electrode array body as in claim 1 comprising:

at least one electrode which provides an electrical reference or ground potential.

36. An electrode array body as in claim 1 having,

a grasping handle attached to the oval shaped body for holding with a surgical instrument during implantation.

37. A method of reducing stress in the retina caused by the electrode array body as in claim 36 wherein,

attaching the electrode array body by grasping the handle.

38. An electrode array body as in claim 36 wherein,

the oval shaped body is made of silicone having a hardness of about 50 or less on the Shore A scale as measured with a durometer.

39. An electrode array body as in claim 36 wherein,

the grasping handle is a hemi-tube to allow the insertion of a surgical tool during implantation surgery.

40. An electrode array body as in claim 36 wherein,

the grasping handle is a hemi-tube with an internal hole diameter approximately equal to the tube wall thickness.

41. A feeder cable attached to the electrode array body of claim 1 for transmitting electrical signals to the electrode array body wherein,

the cable contains a plurality of conductors that transmit electrical signals to the array.

42. The feeder cable of claim 41 wherein,

the conductors are coiled inside the cable and the cable is filled with silicone having a hardness of about 50 or less on the Shore A scale as measured with a durometer.

43. The feeder cable of claim 41 wherein,

the feeder cable has a plurality of silicone fixation tabs along its length for attachment of the array to the recipient.

44. The feeder cable of claim 41 having,

a grasping handle attached to said feeder cable for holding with a surgical instrument during implantation.

45. The feeder cable of claim 41 having,

a section of straight insulated conductors inside the eye to maximize flexibility of that portion of the cable.

46. An electronics package, which processes electrical signals, attached to the feeder cable of claim 41 wherein,

the electronics package is encased in an electrically insulating biocompatible material to protect the package from the corrosive environment in the body,

the electronics package has at least one fixation tab for attachment to the recipient of the array.

47. An electronics package, which processes electrical signals, as in claim 46 wherein,

the electrically insulating biocompatible material is silicone.

48. A retinal electrode array comprising:

a silicone electrode array body having a hardness of about 50 or less on the Shore A scale as measured with a durometer,

the electrode array body having an oval shape,

the electrode array body having a curved shape such that it substantially conforms to the spherical curvature of the retina of the recipient's eye minimizing stress concentration in the retina,

the electrode array body having at least one mounting aperture for attaching the electrode array to the retina,

the electrode array body having a reinforcing ring surrounding the mounting aperture in the array for locating the mounting aperture during surgery and for structural support of a surgical tack,

the electrode array body having a strain relief slot curved part of the way around the reinforcing ring for relief of stresses formed when the electrode array body is attached to the retina of the recipient,

the electrode array body having a rounded edge to eliminate stress concentrations in the retina from the electrode array body,

the electrode array body having a decreasing radius near its edges causing the edge of the array to lift off of the retina and thus eliminating stress concentrations in the retina from the electrode array body,

the electrode array body having a grasping handle attached to the array for holding during implantation,

the electrode array body having an array of conductive electrodes to transmit electrical signals to the retina,

the electrode array body having at least one conductive electrode serving as a reference or ground potential source,

an electronics package to transmit signals to the electrodes,

a feeder cable to carry electrical signals between the electrodes and the electronics.

49. A method of reducing stress in the retina caused by the electrode array body comprising:

rounding the edges of the electrode array body to avoid contact stresses with the retina or tearing of the retina,

reducing the radius of spherical curvature, which approximates the curvature of the eye, near the edge of the electrode array body,

shaping the electrode array body into an oval shape avoiding stress concentrations in the retina from corners of the array.

50. An electrode array body as in claim 1 wherein,

the oval shaped body has a tapered edge to eliminate stress concentrations in the retina caused by contact with the electrode array body.

51. An electrode array body as in claim 20 having,

a tapered edge on the oval shaped body to eliminate stress concentrations in the retina from contact with the electrode array body.